

(a) subjecting a mixture in a single step to a thermocycling reaction, the thermocycling reaction comprises heat denaturation, annealing and synthesis, wherein said mixture comprises

said RNA,

a buffer solution,

a first primer which is able to hybridize with a strand of said DNA,

a second primer which is able to hybridize with a strand of said DNA

complementary to the strand with which the first primer is able to hybridize, wherein at least one of the first and second primers is labeled,

deoxynucleotides or deoxynucleotide derivatives, wherein said deoxynucleotide

derivatives are able to be incorporated by a thermostable DNA polymerase into growing DNA molecules in place of one of dATP, dGTP, dTTP or dCTP,

at least one dideoxynucleotide or another terminating nucleotide, and at least two thermostable DNA polymerases, wherein said at least two

thermostable DNA polymerases are at least a first thermostable DNA polymerase and a second thermostable DNA polymerase, which second thermostable DNA polymerase has a reduced ability to incorporate said dideoxynucleotide or another terminating nucleotide compared with said first thermostable DNA polymerase,

wherein one of said at least two thermostable DNA polymerases
has reverse transcriptase activity,
to generate full-length and truncated copies of said DNA, wherein the full-length copies
have a length equal to that of at least a portion of said DNA spanning the binding sites
of the first and second primers;

F1
cont.
(b) separating at least said truncated copies to make a sequence ladder; and
thereafter

(c) reading the sequence ladder to obtain the sequence of said at least a
portion of said RNA wherein the conversion of the RNA to the DNA is conducted in the
presence of the at least two thermostable DNA polymerases.

37. (Amended) A kit for sequencing at least a portion of a RNA, comprising
deoxynucleotides or deoxynucleotide derivatives, which deoxynucleotide
derivatives are able to be incorporated by a thermostable DNA
polymerase into growing DNA molecules in place of one of dATP,
dGTP, dTTP or dCTP;

F2
at least one dideoxynucleotide or another terminating nucleotide; and

at least two thermostable DNA polymerases, wherein said at least two
thermostable DNA polymerases are at least a first thermostable
DNA polymerase and a second thermostable DNA polymerase,
which second thermostable DNA polymerase has a reduced ability
to incorporate said dideoxynucleotide or another terminating
nucleotide in comparison to said first thermostable DNA